Sling Psychrometer
Field Guide

Task
Find the relative humidity by measuring the temperatures of wet bulb and dry bulb thermometers.

What You Need
- ❑ Sling psychrometer
- ❑ Watch or timer
- ❑ A psychrometric chart or scale
- ❑ *Atmosphere Investigation Data Sheet* OR *Ozone Data Sheet*

In the Field
1. Stand far enough away from other people and the instrument shelter so you will not hit them with the psychrometer. Stand in the shade if possible with your back to the sun. If there is no shade near the shelter, move to a shady spot nearby, but not too close to trees or buildings.
2. Keep the sling psychrometer as far away as possible from your body to prevent body heat from changing the temperature readings. This is very important in cold weather. Do not touch or breathe on the temperature-sensing parts of the thermometer as this, too, may affect the reading.
3. Open the sling psychrometer case by pulling out the slider, which contains the two thermometers.
4. Wait three minutes to allow the thermometer to read the current air temperature and then read the current dry bulb temperature to 0.5° C using the thermometer with no wick attached. Make sure your eyes are level with the instrument.
5. Record the dry bulb temperature.
6. Check to be sure that there is still distilled water in the reservoir, and that the wick is wet. If it is dry, add distilled water to the reservoir.
7. Sling the psychrometer for 3 minutes
8. Let the psychrometer stop whirling on its own! Do not stop it with your hand or other object.
9. Read the wet bulb temperature to 0.5° C (from the thermometer with the wick attached).
10. Record the wet bulb temperature.
11. Determine the relative humidity using a psychrometric chart or the sliding scale found on the cases of some psychrometers. You may also leave this blank as GLOBE can calculate relative humidity from your wet and dry bulb temperatures.
12. When you are done with the instrument, close it up and return it to the shelter properly.